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EXAMINER

JARRETT, SCOTT L

ART UNIT PAPER NUMBER

3623

DATE MAILED: 01/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/804,170

Applicant(s)

NAKISA, RAMIN C.

Examiner

Scott L. Jarrett

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– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 March 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6/11/2001.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION***Drawings***

1. The drawings are objected to because Figure 1 is not labeled. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be

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labeled "Replacement Sheet" in the page header (as per 37 CFR 1.121(d)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Information Disclosure Statement

3. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Specification

4. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

5. The attempt to incorporate subject matter into this application by reference to Thomas, Elements of Information Theory (Page 4, Lines 22-23), Brown et al., Class-based n-gram models of natural language (Page 5, Lines 9-10), Patel et al., Extracting Semantic Representations from Large Text Corpora (Page 5, Lines 10-13), Manning et al., Foundations of Statistical Natural Language

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Processing (Page 5, Lines 13-14) and Reddington et al., Trends in Cognitive Sciences (Page 5, Lines 23-25) is improper without providing complete copies of the references cited and providing an Information Disclosure Statement listing references.

Claim Objections

6. Claim 16 is objected to because of the following informalities: intended to claim “means for predicting” instead of the “mean for predicting” as disclosed.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claims 8, 11 and 16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Regarding Claims 8, 11 and 16 the disclosure fails to state or teach one of ordinary skill in the art the best mode (by hand, computer or like device) for appropriately communicating with selected customers. Without this disclosure one skilled in the art would be unable to practice the invention without undue experimentation. Further the disclosure fails to state or teach one of ordinary skill in the art the best mode (by hand, computer or like device) for appropriately communicating with selected customers.

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

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10. Claims 3-4, 8, 11, 13-15 and 16-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding Claims 3 and 13 the disclosure does not clearly define the phrase "significantly greater." The phrase significantly greater as claimed can read to include a plurality of concepts and/or values thereby making the term significantly greater as claimed is vague and indefinite.

Regarding Claim 4 the disclosure does not clearly define the phrase "reasonable amount." The phrase reasonable amount of computation time as claimed can read to include a plurality of concepts and/or values thereby making the term reasonable amount as claimed is vague and indefinite.

Regarding Claims 4 and 14 the disclosure does not clearly define the phrase "sufficient predictive accuracy." The phrase sufficient predictive accuracy as claimed can read to include a plurality of concepts and/or values thereby making the term sufficient predictive accuracy as claimed is vague and indefinite.

Regarding Claims 8, 11 and 16, claims 8, 11 and 16 are indefinite as to scope in the use of the term "appropriately" in the phrase "communicate appropriately." Claims 8, 11 and 16 are therefore rejected as being vague and indefinite.

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Regarding Claims 15 and 17 the disclosure does not clearly define the phrase "system." A system as claimed could contain a plurality of elements and without further definition of the system elements the phrase as claimed is vague and indefinite.

Claim Rejections - 35 USC § 101

11. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

12. Claims 1-16 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The basis of this rejection is set forth in a two-prong test of:

- (1) whether the invention is within the technological arts; and
- (2) whether the invention produces a useful, concrete, and tangible result.

For a claimed invention to be statutory, the claimed invention must be within the technological arts. Mere ideas in the abstract (i.e., abstract idea, law of nature, natural phenomena) that do not apply, involve, use, or advance the technological arts fail to promote the "progress of science and the useful arts" (i.e., the physical sciences as opposed to social sciences, for example) and therefore are found to be non-statutory subject matter. For a process claim to pass muster, the recited process must somehow apply, involve, use, or advance the technological arts. Additionally, for a claimed invention to be statutory, the claimed invention must produce a useful, concrete, and tangible result.

Regarding Claim 8, claim 8 only recite an abstract idea. The recited method for customer relationship management does not apply, involve, or use the technological arts since all of the recited steps can be performed in the mind of the user or by use of a pencil and paper. The claimed invention, as a whole, is

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not within the technological art as explained above claim 8 is deemed to be directed to non-statutory subject matter.

As to technological arts recited in the preamble, mere recitation in the preamble (i.e., intended or field of use) or mere implication of employing a machine or article of manufacture to perform some or all of the recited steps does not confer statutory subject matter to an otherwise abstract idea unless there is positive recitation in the claim as a whole to breathe life and meaning into the preamble. In the present case, none of the recited steps are directed to anything in the technological arts as explained above with the exception of the recitation that the method is an "computerized method." Looking at the claims as a whole, nothing in the body of the claims recites any structure or functionality to suggest that a computer performs the recited steps. Therefore, the terms discussed are taken to merely recite a field of use and/or nominal recitation of technology.

Software, programming, instructions or code not claimed as embodied in computer-readable media are descriptive material per se and are not statutory because they are not capable of causing functional change in a computer. When such descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases.

Furthermore, software, programming, instructions or code not claimed as being computer executable are not statutory because they are not capable of

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causing functional change in a computer. In contrast, when a claimed computer-readable medium encoded with a computer program defines structural and functional interrelationships between the computer and the program, and the computer is capable of executing the program, allowing the program's functionality to be realized, the program will be statutory.

Regarding Claim 1-7 and 9-16 do not utilize the proper computer program product format and effectively recite descriptive material (software) per se. Claims 1-7 and 9-16 are therefore deemed to be directed to non-statutory subject matter where there is no indication that the proposed software is recorded on computer-readable medium and/or capable of execution by a computer. Examiner suggests that the applicant incorporate into Claims 1-7 and 9-16 language that the proposed software is recorded on computer-readable medium and capable of execution by a computer to overcome this rejection.

Correction required. See MPEP § 2106 [R-2].

Claim Rejections - 35 USC § 102

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

14. Claims 1, 8-11 and 15-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Martin et al., U.S. Patent No. 6,338,066.

Regarding Claims 1, 8-11 and 15-17 Martin et al. teach a system for predicting the future behavior of an individual (customer relationship management system, SurfAid Predictor) the system comprising:

- profiling a user's behavior (web logs, feature vector; Column 2, Lines 5-19);
- analyzing the content of Internet web sites' visited by users (surfers, content categorization, content vector, site content information; Column 1, Lines 59-60; Column 2, Lines 5-18; Column 7, Lines 49-54; Figures 2, 3 and 5; Claim 1);
- predicting the users future behavior using a plurality of predictive models/algorithms including but not limited to single value decomposition (predictive modeling, the predictor model, behavior vector; Column 1, Lines 49-

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52; Column 3, Lines 3-11; Column 4, lines 35-68; Column 5, Lines 5-7 and 53-

68; Column 6, Lines 18-68; Column 9, Lines 1-5; Figure 5; Claim 6); and

- communicating appropriately (targeted informational content) with specific users (Column 3, Lines 3-11; Column 6, Lines 25-50; Column 9, Lines 6-17).

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. Claims 2-7 and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin et al., U.S. Patent No. 6,338,066 in view of Synder et al., U.S. Patent No. 6,038,561.

Regarding Claims 2 and 12 Martin et al. teach the content analysis of Internet web sites (content categorization) as discussed above. Martin et al. further teach that the results of the Internet web site content analysis are stored in series of vectors, which are, used as inputs into the predictive model (Feature, Actions and Behavior (FAB) processor; Column 7, Lines 48-57; Figures 2 and 3).

Martin et al. does not teach that the analysis of an Internet web site's content includes combining text from a plurality of web sites or the identification of a plurality of keywords (relevant terms, most informative words).

Synder et al. teach an information (document, text, content) analysis and management system (Column 2, Lines 8-11) that utilizes a plurality of well-known content analysis methods including but not limited to word-vector, semantic-thread (subject vector, general themes/subject of a document), natural language processing, and subject field code (Column 3, Lines 50-58; Column 6, Lines 65-68; Column 7, Lines 1-29).

More specifically Synder et al. teach:

- the content analysis of a plurality of documents and the combining of a plurality of documents into a dataset of text and images (database, corpus, compound documents; Column 2, Lines 58-68; Column 4, Lines 29-45);
- that the system provides a information retrieval method (search routine) wherein the user provides a plurality of search terms (keywords, informative words, etc.) utilized by the system in conjunction with the system's understanding of the structure and concepts associated with the searched dataset (Column 4, Lines 8-16 and Lines 19-25) to provide the user with a ranked set of documents matching the keywords (Column 3, Lines 1-5; Column 19, Lines 7-17); and
- the creation of multidimensional arrays capturing metrics (representative data, user selected metrics) related to the contents of a document (Column 3, Lines 59-68; Column 49-51).

Synder et al. teach that the utilization of a plurality of analysis methods enables the system to discover a larger number of related/relevant documents than that systems employing only a single analysis method and that the plurality of analysis methods provide the user with greater confidence in the results (second opinion; Column 3, Lines 50-58).

It would have been obvious to one skilled in the art at the time of the invention that the system for predicting the future behavior of an individual as taught by Martin et al. would have benefited from extending the system's content analysis capabilities with the ability to analyze a plurality of Internet web site's utilizing a plurality of content analysis techniques in view of the teachings of Synder et al. thereby enabling a more robust and detailed analysis of an Internet web site's content to be included in the users behavior profile (behavior vector, content vector). The resultant behavior profile enabling the system's predictive model to more accurately predict the user's behavior.

Regarding Claims 3 and 13 Martin et al. does not teach that the analysis of an Internet web site's content includes selecting and/or determining a plurality of statistics related to text (words) contained therein.

Synder et al. teach an information analysis and management system wherein search terms (keywords, most informative words, search criteria) are

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provided by the user and utilized by the system to retrieve related information (documents) as discussed above.

Synder et al. further teach the determination and utilization of a plurality of metrics (data, statistics, etc.) associated with the keywords including but not limited to the use of metrics generated by the well-known term frequency/inverse document frequency technique (TFDIF, word count, term frequency; Column 6, Lines 65-68; Column 7, Lines 1-14 and Lines 15-29; Column 8 Lines 60-65; Figure 4A).

It would have been obvious to one skilled in the art at the time of the invention that the system for predicting the future behavior of an individual as taught by Martin et al. would have benefited from extending the system to include a plurality of content analysis techniques, including the use of well-known information retrieval metrics, in view of the teachings of Synder et al. The resultant system providing for a more robust and detailed content analysis to be included in the user's behavior profile and thereby enabling the system to predict the user's future behavior with greater accuracy and confidence.

Synder et al. does not expressly teach the use of large text corpora as a means for determining (measuring) the relative occurrence of the search terms in documents.

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Official notice is taken that the use of large text corpora as a means for determining (measuring) the relative occurrence of a term in a dataset as compared to the frequency of the term in the same language is old and very well known in the art.

It would have been obvious to one skilled in the art at the time of the invention that the system for predicting the future behavior of an individual as taught by Martin et al. would have benefited from including a plurality of content analysis techniques, including the use of well-known information retrieval metrics, in view of the teachings of Synder et al.

Further it would have been obvious to one skilled in the art at the time of the invention that the system for predicting the future behavior of an individual as taught by Martin et al. would have benefited from the ability to compare the frequency of occurrence of a term in a document with the term's frequency of occurrence in the general lexicon thereby providing a well known method for determining (weighting) the relevance of a term to the document and in determining the concept related to the document.

The resultant system providing for a more robust and detailed content analysis to be included in the user's behavior profile and thereby enabling the system to predict the user's future behavior with greater accuracy and confidence.

Regarding Claims 4 and 14 Martin et al. teach the use of multidimensional vectors to represent the behavior of users and the content of Internet web site as discussed above. Martin et al. further teach the use of single value decomposition (SVD) as a means for generating a linear model for predicting the future behavior of a user (Column 5, Lines 54-66; Column 6, Lines 1-68).

Martin et al. is silent on the use of semantic vectors or the identification of a semantic vector associated with a keyword.

Official notice is taken that SVD is a well-known technique used in information retrieval methods including latent semantic indexing (LSI). The SVD technique takes a large word-by-document matrix and decomposes it into a set of k orthogonal factors from which the original matrix (vectors) can be approximated by linear combination. LSI analysis then represents each of these factors as continuous values derived from the SVD analysis resulting in terms with similar contexts have similar vectors (semantic vectors).

It would have been obvious to one skilled in the art at the time of the invention that the system for predicting the future behavior of an individual as taught by Martin et al. would have benefited from utilizing the well-known information retrieval techniques for analyzing the content of Internet web sites

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including the use of semantic vectors. The resultant system providing for a more robust and detailed content analysis to be included in the user's behavior profile and thereby enabling the system to predict the user's future behavior with greater accuracy and confidence.

Synder et al. teach the determination and utilization of a plurality of content analysis metrics and a plurality of multidimensional vectors as discussed above. More specifically Synder et al. teach the use of semantic thread analysis (conceptual representation, subject vector) and natural language processing as a means for deriving semantic vectors from plurality of metrics including but not limited to co-occurrence statistics (Column 6, Lines 65-68, Column 7, Lines 1-30, Column 8, Lines 30-35).

It would have been obvious to one skilled in the art at the time of the invention that the system for predicting the future behavior of an individual as taught by Martin et al. would have benefited from utilizing the robust content analysis techniques as taught by Synder et al. The resultant system providing for a more robust and detailed content analysis to be included in the user's behavior profile and thereby enabling the system to predict the user's future behavior with greater accuracy and confidence.

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Regarding Claim 5 Martin et al. does not expressly teach the use of keywords as part of an Internet site's content vector or that the number of keywords is predetermined.

Synder et al. teach that the system predetermines (precomputes) a manageable size for the retrieved documents limiting the number of documents retrieved to only those that have top scores above the predetermined limit thereby reducing the amount of computation time (Column 17, Lines 45-55).

It would have been obvious to one skilled in the art at the time of the invention that the system for predicting the future behavior of an individual as taught by Martin et al. would have benefited from the increased performance and scalability provided by the ability to limit the amount of content analyzed and ultimately added to a user's behavior profile in view of the teachings of Synder et al.

Regarding Claim 6 Martin et al. does not expressly teach the use of varying of the number of keywords associated with the content vector of an Internet web site.

Synder et al. teach the varying of a plurality of values associated with the content retrieval including the use of start value and end value for the phrase, theme, term and concept scores associated with a document (Column 17, Lines

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55-64; Column Figures 12a and 12c) as a means for honing in on the content most relevant to the users keywords (query text).

It would have been obvious to one skilled in the art at the time of the invention that the system for predicting the future behavior of an individual as taught by Martin et al. would have benefited from the ability to more accurately analyze information in view of the teachings of Synder et al. The resultant system providing for a more robust and detailed content analysis to be included in the user's behavior profile and thereby enabling the system to predict the user's future behavior with greater accuracy and confidence.

Regarding Claim 7 Martin et al. does not expressly teach the use of a cross-validation procedure.

Official notice is taken that a cross-validation procedure is a well-known means for improving the predictive accuracy of a model (as per applicant's own admission, Specification, Page 2, Lines 26-27). Accordingly it would have been obvious to one skilled in the art at the time of the invention that the system for predicting the behavior of an individual as taught by Martin et al. would have benefited from the improved accuracy of its predictive modeling by utilizing the well-known technique of cross-validation.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Caid et al., U.S. Patent No. 5,619,709, teach a system for analyzing the content of documents using vector space methods. More specifically Caid et al. teach the creation of context vectors as a means for representing the meaning or content of a document as well as the use of k-means clustering to determine the optimum fitting of the content's context.

- Kirsch, Steven, U.S. Patent No. 5,659,732, teaches an information retrieval system where in ranking and relevance scores are utilized.

- Pirolli et al., U.S. Patent No. 5,835,905, teach a system predicting the future behavior (information need/interests) of users including the analysis of the content of Internet sites (meta-information, categorization, text similarity, topology, etc.) and profiling the user (usage path, usage statistics, etc.).

- Herz et al., U.S. Patent 5,835,087, teach an information retrieval system wherein information is retrieved based on document ranking and relevance scores based on the number of occurrences of search term(s) in the document.

- Gerace, Thomas A., U.S. Patent No. 5,848,396, teaches a system for predicting the future behavior of an individual by tracking and profiling an individual wherein data is collected with respect to the content viewed by the user. Gerace further teaches the combining of data (data assembly) from a plurality of sources and that the information is displayed to the user based on their profile.

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- Corey et al., U.S. Patent No. 5,987,446, teach an information retrieval system that utilizes a plurality of different search techniques (search engines), including but not limited to semantic search techniques, for identifying information that appears to meet the search query. Corey et al. further teach that the search techniques have the ability to determine the relevance of the information retrieved based on the analysis of the content and a plurality of other information items.

- Gerace, Thomas A., U.S. Patent No. 5,991,735, teaches a system for predicting the future behavior of an individual by tracking and profiling an individual wherein data is collected with respect to the content viewed by the user.

- Kurtzman, Stephen, U.S. Patent No. 6,044,376, teaches a system for providing customized informational content to a user based on the user's profile wherein the user profile includes the analysis of a content stream (a series of web pages visited). More specifically Kurtzman teaches that the content stream analysis is used to generate metrics including but not limited to word frequency statistics and that the metrics are represented (stored, manipulated) in the form of multi-dimensional vectors.

- Messerly et al., U.S. Patent No. 6,076,051, teach a system for analyzing the content of documents (information retrieval system) that utilizes the semantic representation of text in conjunction with conventional information retrieval methods.

- Lazarus et al., U.S. Patent No. 6,134,532, teach a system for targeting and delivering informational content, represented as content vectors, to users based upon observed behavior, including but not limited to search queries, web pages and positions in the directory hierarchy visited. Lazarus et al. further teach first and second generation targeting techniques as well as the use of more advanced user-profiling tools including but not limited to collaborative filtering. Collaborative filtering being defined as a set of technologies for predicting user behavior by extracting trends from the behavior of users through the use of advanced statistical models and other forms of intelligent software.

- Wyard et al., U.S. Patent No. 6,167,398, teach an information retrieval system enabling users to analyze the content of documents including but not limited to Internet (URL) documents wherein a plurality of metrics are utilized such as co-occurrence statistics, word frequency of occurrence, word count, n-gram language model, etc. Wyard et al. further teach the use of vectors to represent the document metrics .

- Makuch et al., U.S. Patent No. 6,330,592, teach a system for predicting the behavior of a user wherein the system observes the behavior of the user (web sites/pages visited, web page content, etc.) and then provides customized informational content to the user based on the observed behavior (profile).

- Welsh et al., U.S. Patent No. 6,757,691 teaches a system for predicting the future behavior of an individual based on matching the user's profile with the content's profile (categorization). Welsh et al. further teach that the user's profile includes visited web sites, browsing patterns and other monitored user activities.

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- Liddy Elizabeth D, Enhanced text retrieval using natural language processing teaches the application of well-known natural language processing techniques for information retrieval. Liddy further teaches that there exists a plurality of natural language processing techniques including but not limited to lexical and semantic analysis techniques.

- Foltz, Peter et al., Personalized Information Delivery: An Analysis of Information Filtering Methods teach a plurality of tools, technologies, systems and methods for providing personalized informational retrieval and delivery. More specifically Foltz, Peter et al. teach the comparison of four well-known information retrieval methods for predicting what information would be of most interest to a user.

- Engage Technologies And Net Perceptions Join Forces To Deliver Market-Leading Internet Personalization Solutions teaches the availability of online profiling/personalization tools such as Personify and Netperceptions that enable companies to profile online user behavior (surfing patterns, surveys, etc.) and target editorial/informational content based on the to the user based on their profile.

- Dan R Greening, Tracking users, teaches the plurality of tools, technologies and systems that enable the tracking and profiling of online visitors.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott L. Jarrett whose telephone number is (703) 306-5679. The examiner can normally be reached on 8:00AM - 5:00PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hafiz Tariq can be reached on (703) 305-9643. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SJ
12/23/2004



TARIQ R. HAFIZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600